

DERWENT PUBLICATIONS LTD.

61751V/35 803 Ciba-Geigy AG CHA 19.02.73
23.10.73-CH-014936 (+00238) (22.08.74) C07d-31/32 DT 2405-171
Oxo alkyl pyridine compds. - having fibrinolytic, analgesic and anti-inflammatory activity are prep'd. e.g. by oxidn of correspond. alcohol

Compds. of formula (I) and their salts are new:

$\begin{array}{c} X \\ | \\ R-Ph-A-C-Py \end{array}$ (I) (where R= opt. substd. cycloaliphatic gp.), Ph= ortho- or para-phenylene gp.; A= lower alkylene or a direct bond, X= oxo grp. opt. functionally modified e.g. to NOH, Py= pyridyl).

USES

Compds. (I) are useful intermediates and have fibrinolytic, analgesic and anti-inflammatory activities. Test results are reported.

PREPARATION

(i) $R-Ph-A-Y + Z-Py \longrightarrow (I)$

(ii) $\begin{array}{c} OH \\ | \\ R-Ph-A-CH-Py \end{array} \xrightarrow{\text{oxidn. esp. } CuO_3} (I)$

B7-D4, B12-(D1, D7), B12-H2.

(III) $\begin{array}{c} X \\ | \\ R-Ph-A_1-C-Py \end{array} \longrightarrow (I)$

(iv) $Py-Y_1 + R-Ph-H \longrightarrow (I)$

(v) $\begin{array}{c} X \\ | \\ R-Ph-A_2-C-Py \end{array} \xrightarrow{H_2} (I; A=\text{alkylene})$

wherein (i) one of the gps. Y and Z is carboxyl, or a functional deriv. thereof and the other is a metal atom; (ii) A₁= A substd. by a cleavable gp. Y; esp. an $\alpha-CO_2H$ gp.; (iii) Y₁ is a functionally modified carboxyl gp.; (iv) A₂= lower alkylene

DETAILS

Y may be an esterified carboxyl, anhydride or a cyano gp.; Z= Na, K, pref. Li or Zn-Hal, pref. Cd-Hal or Mg-Hal. Y₁ is suitably an acid chloride gp. and the reaction is carried out in the conventional way using a Lewis acid as catalyst.

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SPECIFICALLY CLAIMED

Py	Ph	position of substituent	position of substituent
-ACU			
2-	-CO or -CH(CH ₃)CO	4-R' or 3-Cl-4-R'	
3-	-CO	4-R'	
2-	-CO or -CH(CH ₃)CO (or oxime)	4-R ¹⁰	
4-	-CH(CH ₃)CO	4-R ¹⁰	
2-, 6-Me	-CH(CH ₃)CO	4-R ¹⁰	

(R⁰= cyclohexyl; R¹⁰= cyclohexen-1-yl).

EXAMPLE

A 1.5N soln. (175 ml) of butyllithium in ether was stirred at -60° under an atm. of N₂ and 2-bromopyridine (40 g) in anhydrous ether (50 ml) was slowly added dropwise. After 15 mins, p-(1-cyclohexenyl)-benzoic acid (15 g) in anhydrous ether (250 ml) was added. The reaction mixt. was then allowed to warm to room temp. before being stirred for 2 hrs. It was then poured onto a mixt. of ice and NH₄Cl and partitioned between water and ether. The ether phase was ssp'd, washed with water, 0.1N NaOH soln. and water, dried over Na₂SO₄ and evaporated under reduced pressure. The residue was distilled under reduced pressure. The frac-

tion-b.pt. 200° (0.9mm Hg) contained crude 2-[p-(1-cyclohexenyl)-phenyl]oxymethyl-pyridine, m.pt. 58-60°. (61751V)

61761V/35 806 E01 K08 N V PHILIPS PHG 20.02.73

20.02.73-NL-002304 (22.08.74) B01d-57/24 C01g-57

Liquids contg. 99m technetium - Isotope generator using alumina and hydrated manganese dioxide with 99m molybdenum as sodium molybdate

In a process for producing liquids contg. 99m Tc, using a vessel contg. an alumina carrier for the mother isotope (99m Mo) which is present as a molybdate, part of the alumina is coated with hydrated manganese dioxide in amnt. of 1.5-4 mg. Mo per gram of alumina, pref. 2.2-3 mg/g.

USE

The solns. contg. 99m Tc are useful as tracers in medical diagnosis and for marking protein and sulphur colloids.

ADVANTAGES

The product solns. are of good purity, contg. no Al³⁺ ions and have pH 6.5-7.5.

DETAILS

The vessel (1) has an entry port (2) at the top and an outlet (3) at the bottom; it is flanged on both ends (4). There is a taper at (5) housing a trapezoidal glass filter (6). The inlet and outlet (2, 3) are closed with flanged rubber plugs (7) secured by aluminum covers (10) containing a hole (11). The upper layer of carrier material (12) consists of alumina

B5-A4, B12-K4.

articles which are partially or fully coated with hydrated or partly hydrated manganese dioxide. The lower layer (13) is alumina. The total amnt. of carrier material is e.g. 7g., of which 3g. is in the upper layer. The carrier material is located between the glass filter (6) and a micropore filter (14) held against the material by a sealing ring (15). In the upper layer (12) is the mother isotope 99m Mo as an alkali metal molybdate, e.g. sodium molybdate. A wash liq. e.g. physiological saline is fed into the top of the vessel through a hollow injection needle and the mother isotope 99m Mo is absorbed as sodium molybdate. Through radioactive decay 99m Tc is present in the form of sodium pertechnetate which is taken up by the soln. and then, after passing through the lower layer (13) and the filter (6), can be drawn off with an injection needle. (61761V).

